

VCU 02-14
Amendment dated 10/21/2011

10/565,852

02940323aa
Reply to office action mailed 06/21/2011

The following is a complete listing of all claims in the application, with an indication of the status of each:

Listing of claims:

- 1 1. (currently amended) An apparatus for measuring intra cranial pressure,
2 comprising:
3 an acoustic eye patch conformably adapted to an eyeball of a patient,
4 said eye patch having sensors for measuring acoustic signals in the brain,
5 without the sensors coming into contact with the skull;
6 a sweep generator for applying acoustic signals to the brain across the
7 skull of the patient, said signals sweeping a predetermined range, a resonant
8 frequency of said eyeball of the patient being within said predetermined
9 range, said predetermined range covering a corresponding range of resonant
10 frequencies across a range of patients; and
11 an analyzer for determining an intra cranial pressure from a degree of
12 damping of ~~an~~ said swept acoustic signal at ~~a~~ the resonant frequency of said
13 eyeball of the patient, said intra cranial pressure being transmitted directly to
14 said eyeball where said pressure and said damping are measured without
15 ~~interference from~~ attenuation by the skull of the patient, said resonant
16 frequency and degree of damping being determined from an output of the
17 acoustic eye patch, wherein said degree of damping is correlated to a measure
18 of said intra cranial pressure.
- 1 2. (previously presented) The apparatus of claim 1, wherein said
2 predetermined range is an ultrasonic resonance range.

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1 3. (previously presented) The apparatus of claim 1, wherein the acoustic eye
2 patch is adapted to be applied to both eyeballs of the patient.

1 4. (currently amended) The apparatus of claim 2, wherein the predetermined
2 resonance range is ~~20-175~~ 30-50 kHz.

1 5. (original) The apparatus of claim 1, wherein the acoustic eye patch sensor
2 is a piezoelectric film.

1 6. (original) The apparatus of claim 3, wherein the analyzer determines
2 coherence between eyeballs of the patient.

1 7. (currently amended) The apparatus of claim 1, wherein ~~said predetermined~~
2 ~~range includes frequencies less than 20 kHz and~~ said analyzer detects retinal
3 artery pulsations, and wherein pressure is applied to the eye via said acoustic
4 eye patch until the retinal artery pulsations disappear, said applied pressure
5 being a further measure of intra cranial pressure.

1 8. (currently amended) A method for determining intra cranial pressure,
2 comprising the steps of:
3 conformably adapting an acoustic eye patch to an eyeball of a patient,
4 said eye patch having sensors for measuring acoustic signals in the brain,
5 without the sensors coming into contact with the skull;
6 applying acoustic signals to the brain across the skull of the patient,
7 said signals sweeping a predetermined range, a resonant frequency of said
8 eyeball of the patient being within said predetermined range, said
9 predetermined range covering a corresponding range of resonant frequencies
10 across a range of patients; and

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11 determining an intra cranial pressure from a degree of damping of ~~an~~
12 said swept acoustic signal at ~~a~~ the resonant frequency of said eyeball of the
13 patient, said intra cranial pressure being transmitted directly to said eyeball
14 where said pressure and said damping are measured without ~~interference from~~
15 attenuation by the skull of the patient, said resonant frequency and degree of
16 damping being determined from an output of the acoustic eye patch, wherein
17 said degree of damping is correlated to a measure of said intra cranial
18 pressure.

1 9. (previously presented) The method of claim 8, wherein said predetermined
2 range is an ultrasonic resonance range.

1 10. (original) The method of claim 8, wherein the acoustic eye patch is
2 applied to both eyeballs of the patient.

1 11. (currently amended) The method of claim 9, wherein the predetermined
2 resonance range is ~~20-175~~ 30-50 kHz.

1 12. (original) The method of claim 8, wherein the acoustic eye patch sensor
2 is a piezoelectric film.

1 13. (original) The method of claim 10, wherein the analyzer determines
2 coherence between eyeballs of the patient.

1 14. (currently amended) The method of claim 8, wherein ~~said predetermined~~
2 ~~range includes frequencies less than 20 kHz and~~ said analyzer detects retinal
3 artery pulsations, and wherein pressure is applied to the eye via said acoustic

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- 4 eye patch until the retinal artery pulsations disappear, said applied pressure
- 5 being a further measure of intra cranial pressure.